

CLAIMS:

1. A cardless sales method comprising:
 - storing card issuing information including card authentication information and card information issued by a card issuer in a mobile communication terminal;
 - transmitting the card issuing information from the mobile communication terminal to a sales processing device when executing sales processing using the card issuing information;
 - determining a validity of the card information by the sales processing device based on the card authentication information included in the card issuing information received from the mobile communication terminal; and
 - executing predetermined sales processing by the sales processing device when the card information is determined to be valid.
2. The cardless sales method according to Claim 1, wherein
 - the sales processing device is an automatic vending machine, and
 - the automatic vending machine permits the sales transaction using the card issuing information when the card information is determined to be valid based on the card authentication information included in the card issuing information received from the mobile communication terminal, and stores and accumulates sales price information related to the sales transaction together with the card information when the sales transaction is executed.
3. The cardless sales method according to Claim 1, wherein the card authentication information is generated by using a password managed in confidence between the card issuer and the sales processing device or at least a part of the card information.
4. The cardless sales method according to Claim 1, wherein
 - the card issuing information includes:

first information obtained by encrypting the card information with a first key;
and

second information obtained by encrypting with a second key the card
information encrypted with the first key, and

the mobile communication terminal stores information including the first
information and the second information as the card issuing information.

5. The cardless sales method according to Claim 4, wherein
the card issuing information includes information obtained by encrypting
synthesized information of the first information and the second information with a third
key, and

the mobile communication terminal stores the information obtained by
encrypting synthesized information of the first information and the second information
with the third key as the card issuing information.

6. The cardless sales method according to Claim 4, wherein
the sales processing device separates the first information and the second
information from the card issuing information received from the mobile communication
terminal;

determines the validity of the card issuing information by encrypting the first
information with the second key, and comparing the encrypted first information with the
second information; and

stores and accumulates sales price information related to the sales transaction
together with the first information when a sales transaction has been performed using the
card issuing information.

7. The cardless sales method according to Claim 5, wherein the sales processing
device decrypts the card issuing information received from the mobile communication
terminal with the third key before separating the card issuing information into the first
information and the second information.

8. The cardless sales method according to Claim 4, wherein the card issuer collects the first information and the sales price information accumulated in the sales processing device;

decrypts the first information with the first key to obtain the card information;
and

performs settlement processing on the sales price information based on the card information thus obtained.

9. A cardless sales system comprising:

a card information issuing server that issues card issuing information including card authentication information and card information;

a mobile communication terminal that receives the card issuing information issued by the card information issuing server through wireless communication and stores the received card issuing information;

a sales processing device that performs predetermined sales processing based on the card issuing information received from the mobile communication terminal through communication with the mobile communication terminal; and

a settlement server that collects sales information related to a sales transaction performed using the card issuing information from the sales processing device and settles the sales information,

wherein the mobile communication terminal transmits the card issuing information from the mobile communication terminal to the sales processing device when sales processing is performed with the use of the card issuing information, and

the sales processing device determines the validity of the card information based on the card authentication information included in the card issuing information received from the mobile communication terminal, and performs predetermined sales processing when the card information is determined to be valid.

10. The cardless sales system according to Claim 9, wherein

the sales processing device is an automatic vending machine, and

the automatic vending machine permits a sales transaction using the card issuing

information when the card information is determined to be valid based on the card authentication information included in the card issuing information received from the mobile communication terminal, and stores and accumulates sales price information related the sales transaction together with the card information when the sales transaction has been performed.

11. The cardless sales system according to Claim 9, wherein the card authentication information is generated by using a password managed in confidence between the card information issuing server and the sales processing device or at least a part of the card information.

12. The cardless sales system according to Claim 9, wherein
the card information issuing server comprises:
first encryption means for encrypting the card information with a first key;
second encryption means for encrypting with a second key the card information encrypted by the first encryption means to generate the card authentication information;
and
card issuing information issuing means for synthesizing the card information encrypted by the first encryption means and the card authentication information generated by the second encryption means and transmitting the synthesized information to the mobile communication terminal as the card issuing information.

13. The cardless sales system according to Claim 12, wherein
the card information issuing server further comprises third encryption means for encrypting with a third key the information obtained by synthesizing the card information encrypted by the first encryption means and the card authentication information generated by the second encryption means, and
the card issuing information issuing means transmits the information encrypted by the third encryption means to the mobile communication terminal.

14. The cardless sales system according to Claim 12, wherein

the mobile communication terminal comprises:

storage means for storing the card issuing information issued by the card issuing information issuing means; and

communication means for communicating with the sales processing means when sales processing is performed using the card issuing information to transmit the card issuing information stored in the storage means to the sales processing device.

15. The cardless sales system according to Claim 12, wherein the sales processing device comprises:

separating means for separating the card issuing information received from the mobile communication terminal into the encrypted card information and the card authentication information;

fourth encryption means for encrypting with the second key the encrypted card information obtained by the separation by the separating means;

comparison means for comparing the information encrypted by the fourth encryption means with the card authentication information to determine the validity of the card issuing information;

storing and accumulating means for storing and accumulating, when a sales transaction using the card issuing information has been performed, sales price information related to the sales transaction together with the encrypted card information.

16. The cardless sales system according to Claim 13, wherein

the sales processing device further comprises first decryption means for decrypting with the third key the card issuing information received from the mobile communication terminal, and

the separating means comprises:

separating means for separating the encrypted card information and the card authentication information from the information decrypted by the first decryption means;

fourth encryption means for encrypting with the second key the encrypted card information separated by the separating means;

comparison means for comparing the information encrypted by the fourth

encryption means with the card authentication information to determine the validity of the card issuing information; and

storing and accumulating means for storing and accumulating, when a sales transaction using the card issuing information has been performed, sales price information related to the sales transaction together with the encrypted card information.

17. The cardless sales system according to Claim 15, wherein
the settlement server comprises:

collecting means for collecting the encrypted card information accumulated in the storing and accumulating means of the sales processing device and the sales price information;

second decryption means for decrypting with the first key the encrypted card information collected by the collecting means to obtain the card information; and

settlement processing means for performing settlement processing on the sales price information based on the card information obtained by the decryption by the second decryption means.

18. A cardless sales system comprising:

a card information issuing server that issues card issuing information including card authentication information and card information;

a mobile communication terminal that receives the card issuing information issued by the card information issuing server through wireless communication and stores the received card issuing information;

an automatic vending machine that performs predetermined sales processing based on the card issuing information received from the mobile communication terminal through communication with the mobile communication terminal; and

a settlement server that collects sales information related to a sales transaction performed using the card issuing information from the sales processing device and settles the sales information, wherein

the card information issuing server comprises:

first encryption means for encrypting the card information with a first key;

second encryption means for encrypting with a second key the card information encrypted by the first encryption means to generate the card authentication information;

synthesizing means for synthesizing the card information encrypted by the first encryption means and the card authentication information generated by the second encryption means;

third encryption means for encrypting the information synthesized by the synthesizing means with a third key; and

card issuing information issuing means for transmitting the information encrypted by the third encryption means to the mobile communication terminal as the card issuing information,

the mobile communication terminal comprises:

storage means for storing the card issuing information issued by the card issuing information issuing means; and

communication means for communicating with the sales processing means when sales processing is performed with the use of the card issuing information to transmit the card issuing information stored in the storage means to the sales processing device,

the automatic vending machine comprises:

first decryption means for decrypting with the third key the card issuing information received from the mobile communication terminal;

separating means for separating the encrypted card information and the card authentication information from the information obtained by the decryption by the first decryption means;

fourth encryption means for encrypting with the second key the encrypted card information separated by the separating means;

comparison means for comparing the information encrypted by the fourth encryption means with the card authentication information to determine the validity of the card issuing information; and

storing and accumulating means for storing and accumulating, when a sales transaction using the card issuing information has been performed, sales price information related to the sales transaction together with the encrypted card information, and

the settlement server comprises:

collecting means for collecting the encrypted card information accumulated in the storing and accumulating means of the sales processing device and the sales price information;

second decryption means for decrypting with the first key the encrypted card information collected by the collecting means to obtain the card information; and

settlement processing means for performing settlement processing on the sales price information based on the card information obtained by the decryption by the second decryption means.